

Figure 1

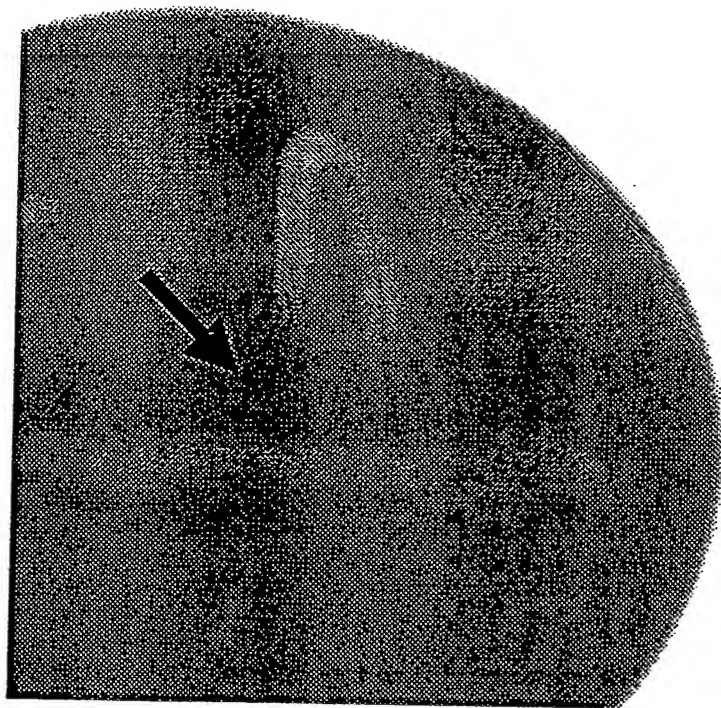


Figure 2

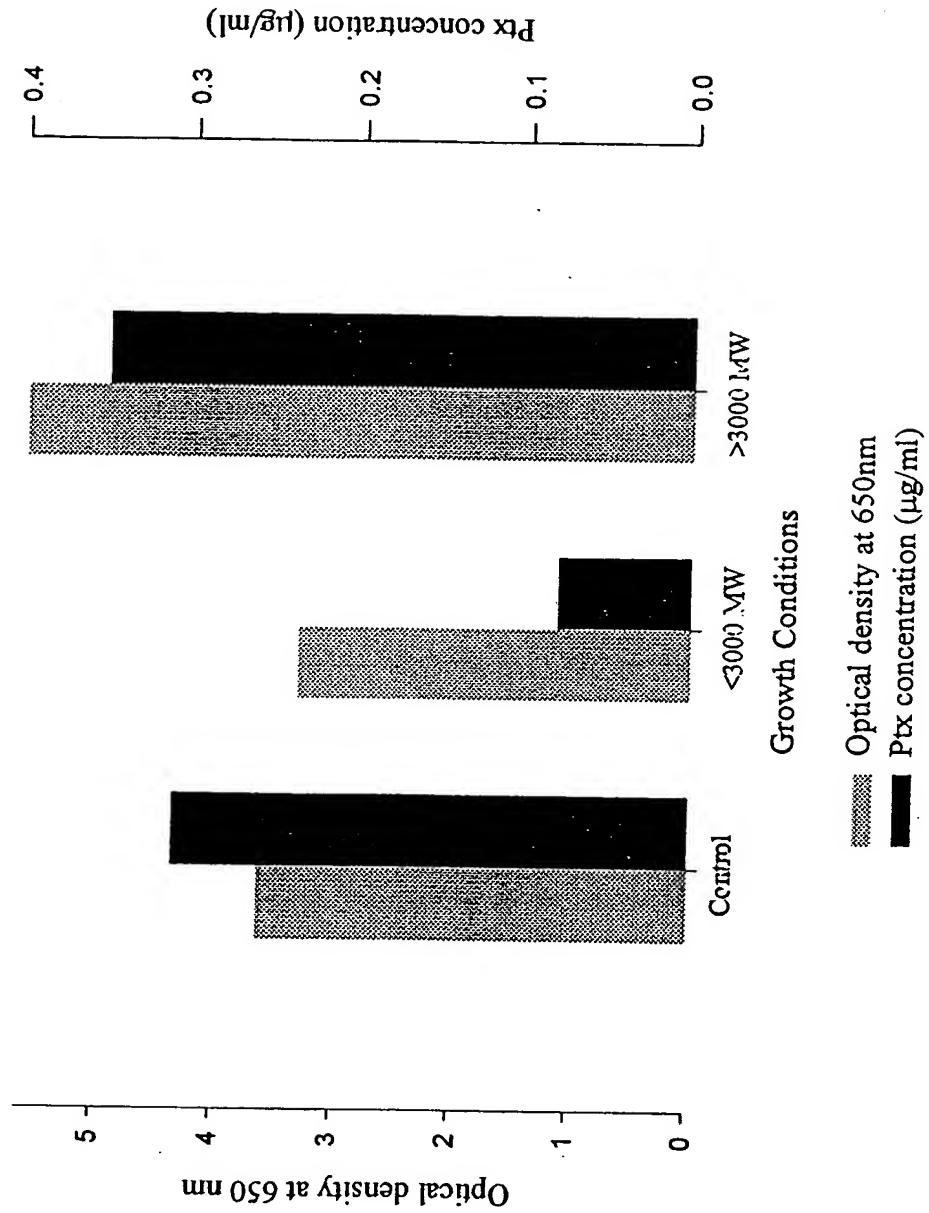


Figure 3

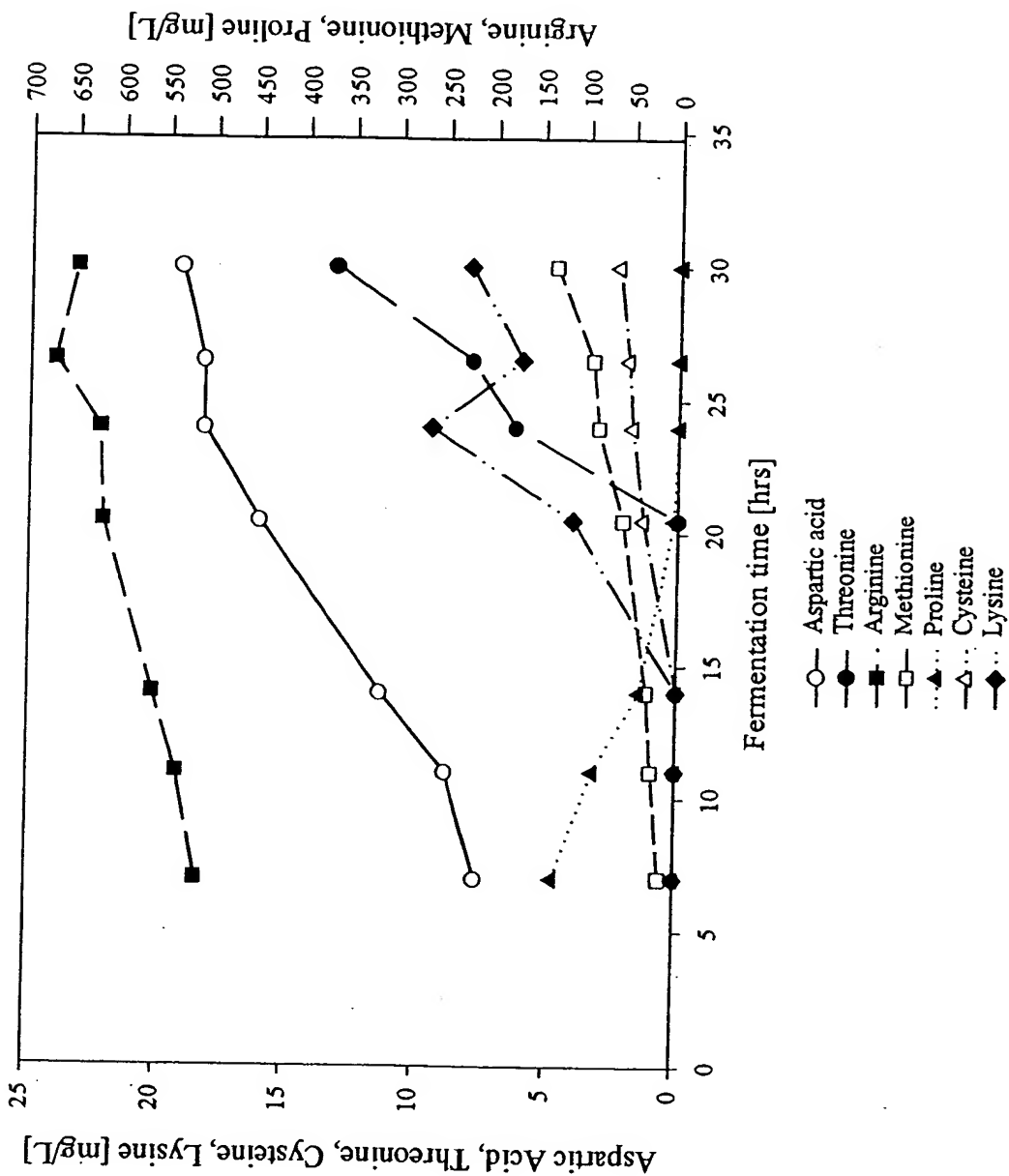


Figure 4A

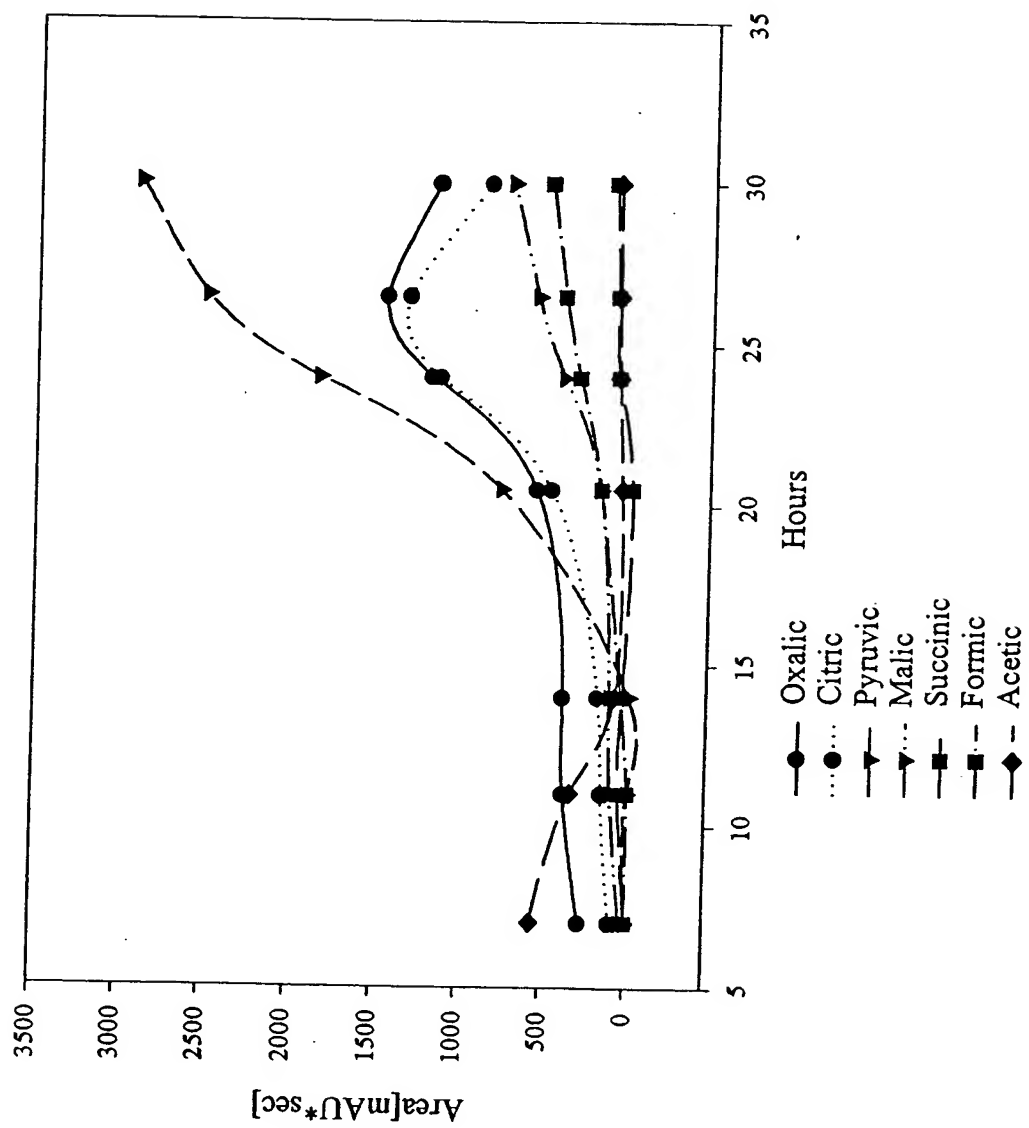


Figure 4B

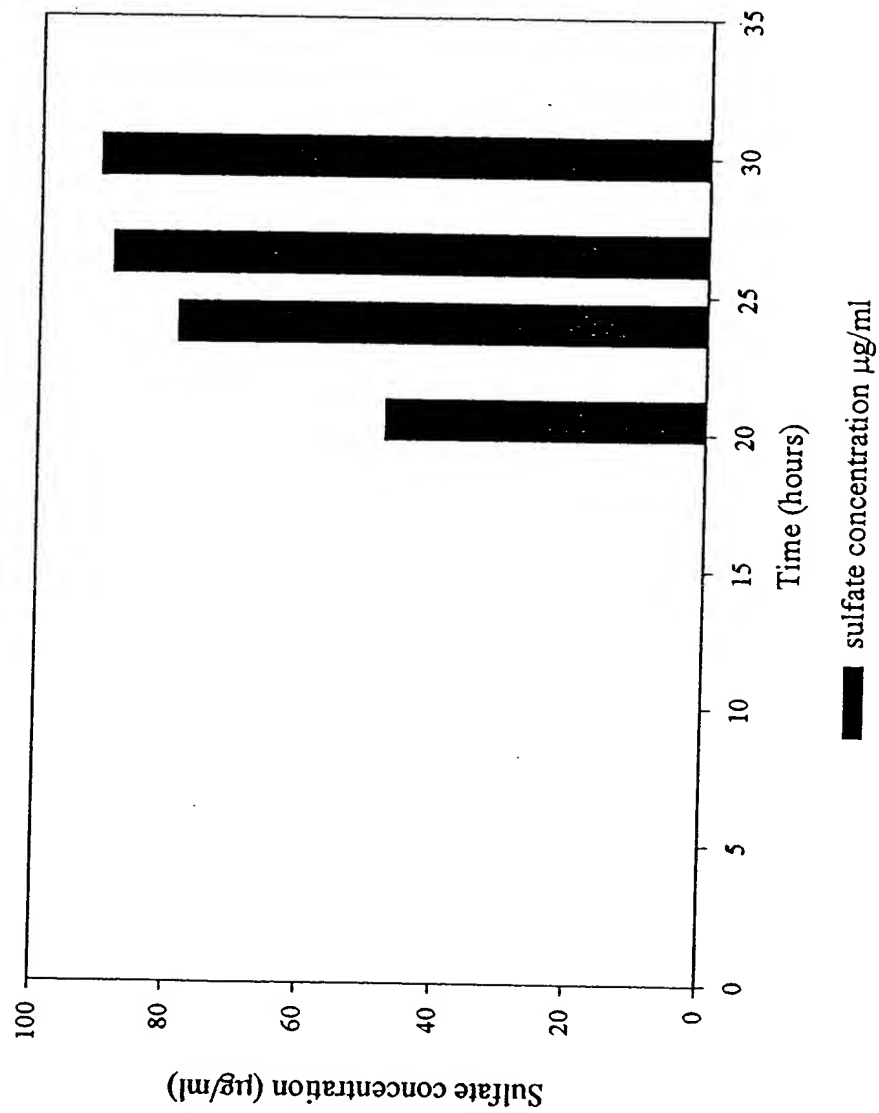


Figure 5

Figure 6

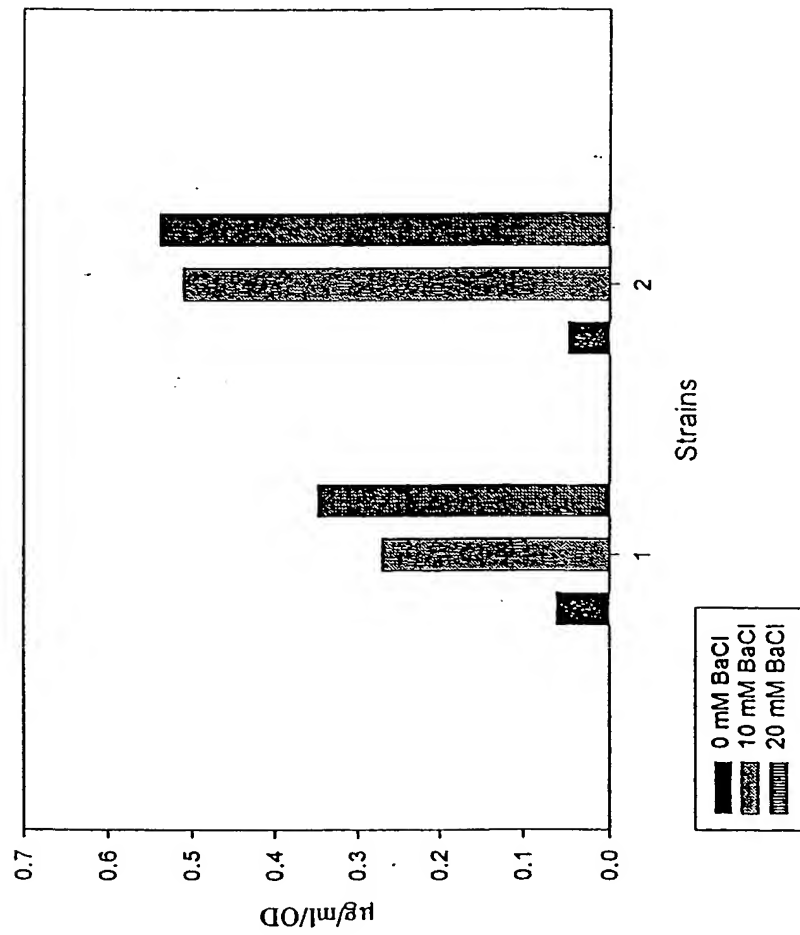


Figure 7

| | 10 | 20 | 30 | 40 | 50 | |
|--------------|----------------|------------|------------|------------|------------|-----|
| DSFBP314.AMI | 1 MSNRPIYLDY | SATTVPDPSV | VEKMIPWLYE | SFGNPASRS | AFGWEAEDAV | 50 |
| DSFBP536.AMI | 1 MSNRPIYLDY | SATTVPDPSV | VEKMIPWLYE | SFGNPASRS | AFGWEAEDAV | 50 |
| | 60 | 70 | 80 | 90 | 100 | |
| DSFBP314.AMI | 51 EKAREEVAKL | VNADPREIVM | TSGATESDNL | AIKGAANFYA | ERKGHIITVK | 100 |
| DSFBP536.AMI | 51 EKAREEVAKL | VNADPREIVM | TSGATESDNL | AIKGAANFYA | ERKGHIITVK | 100 |
| | 110 | 120 | 130 | 140 | 150 | |
| DSFBP314.AMI | 101 TEHKAVLDT | RELERQGFV | TYLDVQDDGL | LSLDAFKAAL | RPDTILVSVM | 150 |
| DSFBP536.AMI | 101 TEHKAVLDT | RELERQGFV | TYLDVQDDGL | LSLDAFKAAL | RPDTILVSVM | 150 |
| | 160 | 170 | 180 | 190 | 200 | |
| DSFBP314.AMI | 151 MVNNEIGVIQ | DIAALGEICR | EKGIIHFVDA | AQATGKVEID | LQKLKVDLMS | 200 |
| DSFBP536.AMI | 151 MVNNEIGVIQ | DIAALGEICR | EKGIIHFVDA | AQATGKVEID | LQKLKVDLMS | 200 |
| | 210 | 220 | 230 | 240 | 250 | |
| DSFBP314.AMI | 201 FSAHKTYGPK | GIGALYVRRK | PRVRIEAQMH | GGGHERGFRR | GTLATHQIVG | 250 |
| DSFBP536.AMI | 201 FSAHKTYGPK | GIGALYVRRK | PRVRIEAQMH | GGGHERGFRR | GTLATHQIVG | 250 |
| | 260 | 270 | 280 | 290 | 300 | |
| DSFBP314.AMI | 251 MGEAFRLARE | EMGTENERVR | MLRDRLLAGL | TQIEEVYVNG | SMEHRVPHNL | 300 |
| DSFBP536.AMI | 251 MGEAFRLARE | EMGTENERVR | MLRDRLLAGL | TQIEEVYVNG | SMEHRVPHNL | 300 |
| | 310 | 320 | 330 | 340 | 350 | |
| DSFBP314.AMI | 301 NISFNYVEGE | SLIMAIKELA | VSSGSACTSA | SLEPSYVLRA | LGRNDELAHS | 350 |
| DSFBP536.AMI | 301 NISFNYVEGE | SLIMAIKELA | VSSGSACTSA | SLEPSYVLRA | LGRNDELAHS | 350 |
| | 360 | 370 | 380 | 390 | 400 | |
| DSFBP314.AMI | 351 SIRFTLGRFT | TEQEIDFTIE | LIKSRVGLR | DMSPLWEMAQ | EGIDLNSVQW | 400 |
| DSFBP536.AMI | 351 SIRFTLGRFT | TEQEIDFTIE | LIKSRVGLR | DMSPLWEMAQ | EGIDLNSVQW | 400 |
| | 410 | 420 | 430 | 440 | 450 | |
| DSFBP314.AMI | 401 AAH* | | | | | 450 |
| DSFBP536.AMI | 401 AAH* | | | | | 450 |
| | 10 | 20 | 30 | 40 | 50 | |
| DSF314.DNA | 1 ATGAGCAATC | GCCCCATCTA | CCTGGACTAC | TCGGCTACCA | CGCCGGTCCA | 50 |
| DSF536F1.DNA | 1 ATGAGCAATC | GCCCCATCTA | CCTGGACTAC | TCGGCTACCA | CGCCGGTCCA | 50 |
| DSF536R1.DNA | 1 | | | | | 50 |
| DSF53611.DNA | 1 | | | | | 50 |
| DSF53612.DNA | 1 | | | | | 50 |
| | 60 | 70 | 80 | 90 | 100 | |
| DSF314.DNA | 51 CCCGAGCGTG | GTCGAGAAAA | TGATTCCCTG | GTTGTACGAG | AGTTTCGGCA | 100 |
| DSF536F1.DNA | 51 CCCGAGCGTG | GTCGAGAAAA | TGATTCCCTG | GTTGTACGAG | AGTTTCGGCA | 100 |
| DSF536R1.DNA | 51 | | | | | 100 |
| DSF53611.DNA | 51 | | | | | 100 |
| DSF53612.DNA | 51 | | | | | 100 |
| | 110 | 120 | 130 | 140 | 150 | |
| DSF314.DNA | 101 ATCCGGCCTC | GCGCAGCCAC | GCCTTTGGCT | GGGAAGCCGA | GGACGCGGTC | 150 |
| DSF536F1.DNA | 101 ATCCGGCCTC | GCGCAGCCAC | GCCTTTGGCT | GGGAAGCCGA | GGACGCGGTC | 150 |
| DSF536R1.DNA | 101 | | | | | 150 |
| DSF53611.DNA | 101 | | | | | 150 |
| DSF53612.DNA | 101 | | | | | 150 |
| | 160 | 170 | 180 | 190 | 200 | |
| DSF314.DNA | 151 GAGAAGGCCC | GCGAGGAAGT | TGCCAAGCTG | GTCAACGCCG | ATCCGCGCGA | 200 |
| DSF536F1.DNA | 151 GAGAAGGCCC | GCGAGGAAGT | TGCCAAGCTG | GTCAACGCCG | ATCCGCGCGA | 200 |
| DSF536R1.DNA | 151 | | | | | 200 |
| DSF53611.DNA | 151 | | | | | 200 |
| DSF53612.DNA | 151 | | | | | 200 |
| | 210 | 220 | 230 | 240 | 250 | |
| DSF314.DNA | 201 GATCGTCTGG | ACTTCCGGCG | CTACCGAGTC | GGACAACCTG | GCCATCAAGG | 250 |
| DSF536F1.DNA | 201 GATCGTCTGG | ACTTCCGGCG | CTACCGAGTC | GGACAACCTG | GCCATCAAGG | 250 |
| DSF536R1.DNA | 201 | | | | | 250 |
| DSF53611.DNA | 201 | | | | | 250 |
| DSF53612.DNA | 201 | | | | | 250 |
| | 260 | 270 | 280 | 290 | 300 | |
| DSF314.DNA | 251 GCGCGGCGAA | TTTCTACGCC | GAGCGCGGCA | AGCACATCAT | TACCGTCAAG | 300 |
| DSF536F1.DNA | 251 GCGCGGCGAA | TTTCTACGCC | GAGCGCGGCA | AGCACATCAT | TACCGTCAAG | 300 |
| DSF536R1.DNA | 251 | | | | | 300 |
| DSF53611.DNA | 251 | | | | | 300 |

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| | | | | | | | |
|--------------|-----|------------|------------|------------|------------|------------|-----|
| DSF53612.DNA | 251 | ----- | ----- | ----- | ----- | 300 | |
| | | 310 | 320 | 330 | 340 | 350 | |
| DSF314.DNA | 301 | ACCGAACACA | AGGCGGTGCT | GGATACCTGT | CGGGAGCTCG | AACGCCAGGG | 350 |
| DSF536F1.DNA | 301 | ACCGAACACA | AGGCGGTGCT | GGATACCTGT | CGGGAGCTCG | AACGCCAGGG | 350 |
| DSF536R1.DNA | 301 | ----- | ----- | ----- | ----- | ----- | 350 |
| DSF53611.DNA | 301 | ----- | ----- | ----- | ----- | ----- | 350 |
| DSF53612.DNA | 301 | ----- | ----- | ----- | ----- | ----- | 350 |
| | | 360 | 370 | 380 | 390 | 400 | |
| DSF314.DNA | 351 | CTTTGAAGTG | ACCTACCTGG | ATGTCCAGGA | CGATGGTCTG | CTCAGCCTCG | 400 |
| DSF536F1.DNA | 351 | CTTTGAAGTG | ACCTACCTGG | ATGTCCAGGA | CGATGGTCTG | CTCAGCCTCG | 400 |
| DSF536R1.DNA | 351 | ----- | ----- | ----- | ----- | ----- | 400 |
| DSF53611.DNA | 351 | ----- | ----- | ----- | ----- | ----- | 400 |
| DSF53612.DNA | 351 | ----- | ----- | ----- | ----- | ----- | 400 |
| | | 410 | 420 | 430 | 440 | 450 | |
| DSF314.DNA | 401 | ATGCGTTCAA | GGCTGCGCTG | CGCCCGGATA | CCATCCTGGT | GTCGGTGATG | 450 |
| DSF536F1.DNA | 401 | ATGCGTTCAA | GGCTGCGCTG | CGCCCGGATA | CCATCCTGGT | GTCGGTGATG | 450 |
| DSF536R1.DNA | 401 | ----- | ----- | ----- | ----- | ----- | 450 |
| DSF53611.DNA | 401 | ----- | ----- | ----- | ----- | ----- | 450 |
| DSF53612.DNA | 401 | ----- | ----- | ----- | ---CCTGGT | GTCGGTGATG | 450 |
| | | 460 | 470 | 480 | 490 | 500 | |
| DSF314.DNA | 451 | ATGGTCAACA | ACGAGATCGG | CGTCATCCAG | GACATCGCCG | CGCTGGGCGA | 500 |
| DSF536F1.DNA | 451 | ATGGTCAACA | ACGAGATCGG | CGTCATCCAG | GACATCGCCG | CGCTGGGCGA | 500 |
| DSF536R1.DNA | 451 | ----- | ----- | ----- | ----- | ----- | 500 |
| DSF53611.DNA | 451 | ----- | ----- | ----- | ----- | ----- | 500 |
| DSF53612.DNA | 451 | ATGGTCAACA | ACGAGATCGG | CGTCATCCAG | GACATCGCCG | CGCTGGGCGA | 500 |
| | | 510 | 520 | 530 | 540 | 550 | |
| DSF314.DNA | 501 | GATCTGCGCG | GAGAAGGGCA | TCATCTTCCA | CGTGGACGCG | GCCCAGGCCA | 550 |
| DSF536F1.DNA | 501 | GATCTGCGCG | GAGAAGGGCA | -CATCTTCCA | CGTGGACGCG | GCC-AAGCCA | 550 |
| DSF536R1.DNA | 501 | ----- | ----- | ----- | ----- | ----- | 550 |
| DSF53611.DNA | 501 | ----- | ----- | ----- | ----- | -----C | 550 |
| DSF53612.DNA | 501 | GATCTGCGCG | GAGAAGGGCA | TCATCTTCCA | CGTGGACGCG | GCCCAGGCCA | 550 |
| | | 560 | 570 | 580 | 590 | 600 | |
| DSF314.DNA | 551 | CCGGCAAGGT | CGAGATCGAC | CTGCAGAAGC | TGAAGGTGGA | CCTGATGTCG | 600 |
| DSF536F1.DNA | 551 | ACGGCAAGGT | CGAGATC--- | ----- | ----- | ----- | 600 |
| DSF536R1.DNA | 551 | ----- | ----- | ----- | ----- | ----- | 600 |
| DSF53611.DNA | 551 | ----- | -----TCGAC | CTGCAGAAGC | TGAAGGTGGA | CCTGATGTCG | 600 |
| DSF53612.DNA | 551 | CCGGCAAGGT | CGAGATCGAC | CTGCAGAAGC | TGAAGGTGGA | CCTGATGTCG | 600 |
| | | 610 | 620 | 630 | 640 | 650 | |
| DSF314.DNA | 601 | TTCTCGGCGC | ACAAGACGTA | CGGCCCAAG | GGCATCGGCG | CGCTGTATGT | 650 |
| DSF536F1.DNA | 601 | ----- | ----- | ----- | ----- | ----- | 650 |
| DSF536R1.DNA | 601 | ----- | ----- | ----- | ----- | ----- | 650 |
| DSF53611.DNA | 601 | TTCTCGGCGC | ACAAGACGTA | CGGCCCAAG | GGCATCGGCG | CGCTGTATGT | 650 |
| DSF53612.DNA | 601 | TTCTCGGCGC | ACAAGACGTA | CGGCCCAAG | GGCATCGGCG | CGCTGTATGT | 650 |
| | | 660 | 670 | 680 | 690 | 700 | |
| DSF314.DNA | 651 | GCGGCGCAAG | CCGCGCGTGC | GCATCGAGGC | GCAGATGCAC | GGCGGCGGCC | 700 |
| DSF536F1.DNA | 651 | ----- | ----- | ----- | ----- | ----- | 700 |
| DSF536R1.DNA | 651 | --GCGCAAG | CCGCGCGTGN | GNATCGAGGC | GCAGATGCAC | GGCGGCGGCC | 700 |
| DSF53611.DNA | 651 | GCGGCGCAAG | CCGCGCGTGC | GCATCGAGGC | GCAGATGCAC | GGCGGCGGCC | 700 |
| DSF53612.DNA | 651 | GCGGCGCAAG | CCGCGCGTGC | GCATCGAGGC | NTAGATGCAC | GGCGGCGGCC | 700 |
| | | 710 | 720 | 730 | 740 | 750 | |
| DSF314.DNA | 701 | ACGAACGGGG | CTTCCGGTGC | GGCACGCTGG | CCACGCACCA | GATCGTCGGC | 750 |
| DSF536F1.DNA | 701 | ----- | ----- | ----- | ----- | ----- | 750 |
| DSF536R1.DNA | 701 | ACGAACGGGG | CTTCCGGTGC | GGCACGNTGG | CCACGCACCA | GATCGTCGGC | 750 |
| DSF53611.DNA | 701 | ACGAACGGGG | CTTCCGGTGC | GGCACGCTGG | CCACGCACCA | GATCGTCGGC | 750 |
| DSF53612.DNA | 701 | ACGAACG--- | ----- | ----- | ----- | ----- | 750 |
| | | 760 | 770 | 780 | 790 | 800 | |
| DSF314.DNA | 751 | ATGGGCGAGG | CGTTCCGCCT | GGCGCGCGAG | GAAATGGGCA | CCGAGAACGA | 800 |
| DSF536F1.DNA | 751 | ----- | ----- | ----- | ----- | ----- | 800 |
| DSF536R1.DNA | 751 | ATGGGCGAGG | CGTTCCGCCT | GGCGCGCGAG | GAAATGGGCA | CCGAGAACGA | 800 |
| DSF53611.DNA | 751 | ATGGGCGAGG | CGTTCCGCCT | GGCGCGCGAG | GAAATGGGCA | CCGAGAACGA | 800 |
| DSF53612.DNA | 751 | ----- | ----- | ----- | ----- | ----- | 800 |
| | | 810 | 820 | 830 | 840 | 850 | |
| DSF314.DNA | 801 | GCGCGTGCGC | ATGCTGCGCG | ACCGCCTGCT | GGCCGGCCTG | ACGCAGATCG | 850 |
| DSF536F1.DNA | 801 | ----- | ----- | ----- | ----- | ----- | 850 |
| DSF536R1.DNA | 801 | GCGCGTGCGC | ATGCTGCGCG | ACCGCCTGCT | GGCCGGCCTG | ACGCAGATCG | 850 |
| DSF53611.DNA | 801 | GCGCGTGCGC | ATGCTGCGCG | ACCGCCTGCT | GGCCGGCCTG | ACGCAGATCG | 850 |
| DSF53612.DNA | 801 | ----- | ----- | ----- | ----- | ----- | 850 |

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| | | 860 | 870 | 880 | 890 | 900 | |
|--------------|------|------------|------------|------------|------------|------------|------|
| DSF314.DNA | 851 | AGGAAGTGTA | TGTGAACGGC | AGCATGGAGC | ACCGCGTGCC | GCACAACCTG | 900 |
| DSF536F1.DNA | 851 | ----- | ----- | ----- | ----- | ----- | 900 |
| DSF536R1.DNA | 851 | AGGAAGTGTA | TGTGAACGGC | AGCATGGAGC | ACCGCGTGCC | GCACAACCTG | 900 |
| DSF53611.DNA | 851 | AGGAAGTGTA | TGTGAACGGC | AGCATGGAGC | ACCGCGTGCC | GCACAACCTG | 900 |
| DSF53612.DNA | 851 | ----- | ----- | ----- | ----- | ----- | 900 |
| | | 910 | 920 | 930 | 940 | 950 | |
| DSF314.DNA | 901 | AACATCAGCT | TCAACTATGT | CGAGGGCGAG | TCTCTGATCA | TGGCGATCAA | 950 |
| DSF536F1.DNA | 901 | ----- | ----- | ----- | ----- | ----- | 950 |
| DSF536R1.DNA | 901 | AACATCAGCT | TCAACTATGT | CGAGGGCGAG | TCTCTGATCA | TGGCGATCAA | 950 |
| DSF53611.DNA | 901 | AACATCAGCT | TCAACTATGT | CGAGGGCGAG | TCTCTGATCA | TGGCGATCAA | 950 |
| DSF53612.DNA | 901 | ----- | ----- | ----- | ----- | ----- | 950 |
| | | 960 | 970 | 980 | 990 | 1000 | |
| DSF314.DNA | 951 | GGAGCTGGCC | GTTTCCAGCG | GTTCCGGCTG | CACGTCGGCC | AGCCTGGAGC | 1000 |
| DSF536F1.DNA | 951 | ----- | ----- | ----- | ----- | ----- | 1000 |
| DSF536R1.DNA | 951 | GGAGCTGGCC | GTTTCCAGCG | GTTCCGGCTG | CACGTCGGCN | AGCCTGGAGC | 1000 |
| DSF53611.DNA | 951 | GGAGCTGGCC | GTTTCCAGCG | GTTCCGGCTG | CACGTCGGC- | ----- | 1000 |
| DSF53612.DNA | 951 | ----- | ----- | ----- | ----- | ----- | 1000 |
| | | 1010 | 1020 | 1030 | 1040 | 1050 | |
| DSF314.DNA | 1001 | CGTCCTATGT | GCTGCGCGCG | CTGGGCCGCA | ACGACGAGCT | GGCGCACAGC | 1050 |
| DSF536F1.DNA | 1001 | ----- | ----- | ----- | ----- | ----- | 1050 |
| DSF536R1.DNA | 1001 | CGTCCTATGT | GCTGCGCGCG | CTGGGCCGCA | ACGACGAGCT | GGCGCACAGC | 1050 |
| DSF53611.DNA | 1001 | ----- | ----- | ----- | ----- | ----- | 1050 |
| DSF53612.DNA | 1001 | ----- | ----- | ----- | ----- | ----- | 1050 |
| | | 1060 | 1070 | 1080 | 1090 | 1100 | |
| DSF314.DNA | 1051 | TCCATCCGCT | TTACCCTGGG | CCGCTTCACG | ACCGAACAGG | AAATCGACTT | 1100 |
| DSF536F1.DNA | 1051 | ----- | ----- | ----- | ----- | ----- | 1100 |
| DSF536R1.DNA | 1051 | TCCATCCGCT | TTACCCTGGG | CCGCTTCACG | ACCGAACAGG | AAATCGACTT | 1100 |
| DSF53611.DNA | 1051 | ----- | ----- | ----- | ----- | ----- | 1100 |
| DSF53612.DNA | 1051 | ----- | ----- | ----- | ----- | ----- | 1100 |
| | | 1110 | 1120 | 1130 | 1140 | 1150 | |
| DSF314.DNA | 1101 | CACGATCGAA | CTGATCAAGA | GTCGTGTCGG | CAAGCTGCGC | GATATGTGCG | 1150 |
| DSF536F1.DNA | 1101 | ----- | ----- | ----- | ----- | ----- | 1150 |
| DSF536R1.DNA | 1101 | CACGATCGAA | CTGATCAAGA | GTCGTGTCGG | CAAGCTGCGC | GATATGTGCG | 1150 |
| DSF53611.DNA | 1101 | ----- | ----- | ----- | ----- | ----- | 1150 |
| DSF53612.DNA | 1101 | ----- | ----- | ----- | ----- | ----- | 1150 |
| | | 1160 | 1170 | 1180 | 1190 | 1200 | |
| DSF314.DNA | 1151 | CGTTGTGGGA | AATGGCCCAG | GAAGGCATTG | ATCTGAATTC | CGTGCACTGG | 1200 |
| DSF536F1.DNA | 1151 | ----- | ----- | ----- | ----- | ----- | 1200 |
| DSF536R1.DNA | 1151 | CGTTGTGGGA | AATGGCCCAG | GAAGGCATTG | ATCTGAATTC | CGTGCACTGG | 1200 |
| DSF53611.DNA | 1151 | ----- | ----- | ----- | ----- | ----- | 1200 |
| DSF53612.DNA | 1151 | ----- | ----- | ----- | ----- | ----- | 1200 |
| | | 1210 | 1220 | 1230 | 1240 | 1250 | |
| DSF314.DNA | 1201 | GCCGCGCACT | GA | ----- | ----- | ----- | 1250 |
| DSF536F1.DNA | 1201 | ----- | ----- | ----- | ----- | ----- | 1250 |
| DSF536R1.DNA | 1201 | GCCGCGCACT | GA | ----- | ----- | ----- | 1250 |
| DSF53611.DNA | 1201 | ----- | ----- | ----- | ----- | ----- | 1250 |
| DSF53612.DNA | 1201 | ----- | ----- | ----- | ----- | ----- | 1250 |

| | 10 | 20 | 30 | 40 | 50 | |
|--------------|----------------|------------|------------|------------|------------|-----|
| DSFBP314.AMI | 1 MSNRPIYLDY | SATTPVDPSV | VEKMIPWLYE | SFGNPASRSH | AFGWEAEDAV | 50 |
| DSFBP536.AMI | 1 MSNRPIYLDY | SATTPVDPSV | VEKMIPWLYE | SFGNPASRSH | AFGWEAEDAV | 50 |
| | 60 | 70 | 80 | 90 | 100 | |
| DSFBP314.AMI | 51 EKAREEVAKL | VNADPREIVW | TSGATESDNL | AIKGAANFYA | ERKGHIITVK | 100 |
| DSFBP536.AMI | 51 EKAREEVAKL | VNADPREIVW | TSGATESDNL | AIKGAANFYA | ERKGHIITVK | 100 |
| | 110 | 120 | 130 | 140 | 150 | |
| DSFBP314.AMI | 101 TEHKAVLDT | RELERQGFV | TYLDVQDDGL | LSLDAFKAAL | RPDTILVSVW | 150 |
| DSFBP536.AMI | 101 TEHKAVLDT | RELERQGFV | TYLDVQDDGL | LSLDAFKAAL | RPDTILVSVW | 150 |
| | 160 | 170 | 180 | 190 | 200 | |
| DSFBP314.AMI | 151 MVNNEIGVIQ | DIAALGEICR | EKGIIIPHVA | AQATGKVEID | LQKLKVDLMS | 200 |
| DSFBP536.AMI | 151 MVNNEIGVIQ | DIAALGEICR | EKGIIIPHVA | AQATGKVEID | LQKLKVDLMS | 200 |
| | 210 | 220 | 230 | 240 | 250 | |
| DSFBP314.AMI | 201 FSAHKTYGPK | GIGALYVRRK | PRVRIEAQMH | GGGHERGFRS | GTLATHQIVG | 250 |
| DSFBP536.AMI | 201 FSAHKTYGPK | GIGALYVRRK | PRVRIEAQMH | GGGHERGFRS | GTLATHQIVG | 250 |
| | 260 | 270 | 280 | 290 | 300 | |
| DSFBP314.AMI | 251 MGEAFRLARE | EMGTENERVR | MLRDRLLAGL | TQIEEYVNG | SMEHRVPHNL | 300 |
| DSFBP536.AMI | 251 MGEAFRLARE | EMGTENERVR | MLRDRLLAGL | TQIEEYVNG | SMEHRVPHNL | 300 |
| | 310 | 320 | 330 | 340 | 350 | |
| DSFBP314.AMI | 301 NISFNVEGE | SLIMAIKELA | VSSGSACTSA | SLEPSYVLRA | LGRNDELAHS | 350 |
| DSFBP536.AMI | 301 NISFNVEGE | SLIMAIKELA | VSSGSACTSA | SLEPSYVLRA | LGRNDELAHS | 350 |
| | 360 | 370 | 380 | 390 | 400 | |
| DSFBP314.AMI | 351 SIRFTLGRFT | TEQEIDFTIE | LIKSRVGKLR | DMSPLWEMAQ | EGIDLNSVQW | 400 |
| DSFBP536.AMI | 351 SIRFTLGRFT | TEQEIDFTIE | LIKSRVGKLR | DMSPLWEMAQ | EGIDLNSVQW | 400 |
| | 410 | 420 | 430 | 440 | 450 | |
| DSFBP314.AMI | 401 AAH* | ..... | ..... | ..... | ..... | 450 |
| DSFBP536.AMI | 401 AAH* | ..... | ..... | ..... | ..... | 450 |
| | 10 | 20 | 30 | 40 | 50 | |
| DSF314.DNA | 1 ATGAGCAATC | GCCCCATCTA | CCTGGACTAC | TCGGCTACCA | CGCCGGTCGA | 50 |
| DSF536F1.DNA | 1 ATGAGCAATC | GCCCCATCTA | CCTGGACTAC | TCGGCTACCA | CGCCGGTCGA | 50 |
| DSF536R1.DNA | 1 | ..... | ..... | ..... | ..... | 50 |
| DSF53611.DNA | 1 | ..... | ..... | ..... | ..... | 50 |
| DSF53612.DNA | 1 | ..... | ..... | ..... | ..... | 50 |
| | 60 | 70 | 80 | 90 | 100 | |
| DSF314.DNA | 51 CCCGAGCGTG | GTCGAGAAAA | TGATTCCCTG | GTTGTACGAG | AGTTTCGGCA | 100 |
| DSF536F1.DNA | 51 CCCGAGCGTG | GTCGAGAAAA | TGATTCCCTG | GTTGTACGAG | AGTTTCGGCA | 100 |
| DSF536R1.DNA | 51 | ..... | ..... | ..... | ..... | 100 |
| DSF53611.DNA | 51 | ..... | ..... | ..... | ..... | 100 |
| DSF53612.DNA | 51 | ..... | ..... | ..... | ..... | 100 |
| | 110 | 120 | 130 | 140 | 150 | |
| DSF314.DNA | 101 ATCCGGCCTC | GCGCAGCCAC | GCCTTTGGCT | GGGAAGCCGA | GGACGCGGTC | 150 |
| DSF536F1.DNA | 101 ATCCGGCCTC | GCGCAGCCAC | GCCTTTGGCT | GGGAAGCCGA | GGACGCGGTC | 150 |
| DSF536R1.DNA | 101 | ..... | ..... | ..... | ..... | 150 |
| DSF53611.DNA | 101 | ..... | ..... | ..... | ..... | 150 |
| DSF53612.DNA | 101 | ..... | ..... | ..... | ..... | 150 |
| | 160 | 170 | 180 | 190 | 200 | |
| DSF314.DNA | 151 GAGAAGGCCC | GCGAGGAAGT | TGCCAAGCTG | GTCAACGCCG | ATCCGCGCGA | 200 |
| DSF536F1.DNA | 151 GAGAAGGCCC | GCGAGGAAGT | TGCCAAGCTG | GTCAACGCCG | ATCCGCGCGA | 200 |
| DSF536R1.DNA | 151 | ..... | ..... | ..... | ..... | 200 |
| DSF53611.DNA | 151 | ..... | ..... | ..... | ..... | 200 |
| DSF53612.DNA | 151 | ..... | ..... | ..... | ..... | 200 |
| | 210 | 220 | 230 | 240 | 250 | |
| DSF314.DNA | 201 GATCGTCTGG | ACTTCCGGCG | CTACCGAGTC | GGACAACCTG | GCCATCAAGG | 250 |
| DSF536F1.DNA | 201 GATCGTCTGG | ACTTCCGGCG | CTACCGAGTC | GGACAACCTG | GCCATCAAGG | 250 |
| DSF536R1.DNA | 201 | ..... | ..... | ..... | ..... | 250 |
| DSF53611.DNA | 201 | ..... | ..... | ..... | ..... | 250 |
| DSF53612.DNA | 201 | ..... | ..... | ..... | ..... | 250 |
| | 260 | 270 | 280 | 290 | 300 | |
| DSF314.DNA | 251 GCGCGGCGAA | TTTCTACGCC | GAGCGCGGCA | AGCACATCAT | TACCGTCAAG | 300 |
| DSF536F1.DNA | 251 GCGCGGCGAA | TTTCTACGCC | GAGCGCGGCA | AGCACATCAT | TACCGTCAAG | 300 |
| DSF536R1.DNA | 251 | | | | | 300 |
| DSF53611.DNA | 251 | | | | | 300 |
| | | | | | | 300 |

Figure 7A

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PRODUCTION OF BACTERIAL TOXINS
37974-0059

| | | | | | | | |
|--------------|-----|------------|------------|------------|-------------|------------|-----|
| DSF53612.DNA | 251 | ----- | ----- | ----- | ----- | 300 | |
| | | 310 | 320 | 330 | 340 | 350 | |
| DSF314.DNA | 301 | ACCGAACACA | AGGCGGTGCT | GGATACCTGT | CGGGAGCTCG | AACGCCAGGG | 350 |
| DSF536F1.DNA | 301 | ACCGAACACA | AGGCGGTGCT | GGATACCTGT | CGGGAGCTCG | AACGCCAGGG | 350 |
| DSF536R1.DNA | 301 | ----- | ----- | ----- | ----- | ----- | 350 |
| DSF53611.DNA | 301 | ----- | ----- | ----- | ----- | ----- | 350 |
| DSF53612.DNA | 301 | ----- | ----- | ----- | ----- | ----- | 350 |
| | | 360 | 370 | 380 | 390 | 400 | |
| DSF314.DNA | 351 | CTTTGAAGTG | ACCTACCTGG | ATGTCCAGGA | CGATGGTCTG | CTCAGCCTCG | 400 |
| DSF536F1.DNA | 351 | CTTTGAAGTG | ACCTACCTGG | ATGTCCAGGA | CGATGGTCTG | CTCAGCCTCG | 400 |
| DSF536R1.DNA | 351 | ----- | ----- | ----- | ----- | ----- | 400 |
| DSF53611.DNA | 351 | ----- | ----- | ----- | ----- | ----- | 400 |
| DSF53612.DNA | 351 | ----- | ----- | ----- | ----- | ----- | 400 |
| | | 410 | 420 | 430 | 440 | 450 | |
| DSF314.DNA | 401 | ATGCGTTCAA | GGCTGCGCTG | CGCCCGGATA | CCATCCTGGT | GTCGGTGATG | 450 |
| DSF536F1.DNA | 401 | ATGCGTTCAA | GGCTGCGCTG | CGCCCGGATA | CCATCCTGGT | GTCGGTGATG | 450 |
| DSF536R1.DNA | 401 | ----- | ----- | ----- | ----- | ----- | 450 |
| DSF53611.DNA | 401 | ----- | ----- | ----- | ----- | ----- | 450 |
| DSF53612.DNA | 401 | ----- | ----- | ----- | -----CCTGGT | GTCGGTGATG | 450 |
| | | 460 | 470 | 480 | 490 | 500 | |
| DSF314.DNA | 451 | ATGGTCAACA | ACGAGATCGG | CGTCATCCAG | GACATCGCCG | CGCTGGGCGA | 500 |
| DSF536F1.DNA | 451 | ATGGTCAACA | ACGAGATCGG | CGTCATCCAG | GACATCGCCG | CGCTGGGCGA | 500 |
| DSF536R1.DNA | 451 | ----- | ----- | ----- | ----- | ----- | 500 |
| DSF53611.DNA | 451 | ----- | ----- | ----- | ----- | ----- | 500 |
| DSF53612.DNA | 451 | ATGGTCAACA | ACGAGATCGG | CGTCATCCAG | GACATCGCCG | CGCTGGGCGA | 500 |
| | | 510 | 520 | 530 | 540 | 550 | |
| DSF314.DNA | 501 | GATCTGCCGC | GAGAAGGGCA | TCATCTTCCA | CGTGGACGCG | GCCCAGGCCA | 550 |
| DSF536F1.DNA | 501 | GATCTGCCGC | GAGAAGGGCA | -CATCTTCCA | CGTGGACGCG | GCC-AAGCCA | 550 |
| DSF536R1.DNA | 501 | ----- | ----- | ----- | ----- | ----- | 550 |
| DSF53611.DNA | 501 | ----- | ----- | ----- | ----- | -----C | 550 |
| DSF53612.DNA | 501 | GATCTGCCGC | GAGAAGGGCA | TCATCTTCCA | CGTGGACGCG | GCCCAGGCCA | 550 |
| | | 560 | 570 | 580 | 590 | 600 | |
| DSF314.DNA | 551 | CCGGCAAGGT | CGAGATCGAC | CTGCAGAAGC | TGAAGGTGGA | CCTGATGTCG | 600 |
| DSF536F1.DNA | 551 | ACGGCAAGGT | CGAGATC--- | ----- | ----- | ----- | 600 |
| DSF536R1.DNA | 551 | ----- | ----- | ----- | ----- | ----- | 600 |
| DSF53611.DNA | 551 | ----- | -----TCGAC | CTGCAGAAGC | TGAAGGTGGA | CCTGATGTCG | 600 |
| DSF53612.DNA | 551 | CCGGCAAGGT | CGAGATCGAC | CTGCAGAAGC | TGAAGGTGGA | CCTGATGTCG | 600 |
| | | 610 | 620 | 630 | 640 | 650 | |
| DSF314.DNA | 601 | TTCTCGGCGC | ACAAGACGTA | CGGCCCAAG | GGCATCGGCG | CGCTGTATGT | 650 |
| DSF536F1.DNA | 601 | ----- | ----- | ----- | ----- | ----- | 650 |
| DSF536R1.DNA | 601 | ----- | ----- | ----- | ----- | ----- | 650 |
| DSF53611.DNA | 601 | TTCTCGGCGC | ACAAGACGTA | CGGCCCAAG | GGCATCGGCG | CGCTGTATGT | 650 |
| DSF53612.DNA | 601 | TTCTCGGCGC | ACAAGACGTA | CGGCCCAAG | GGCATCGGCG | CGCTGTATGT | 650 |
| | | 660 | 670 | 680 | 690 | 700 | |
| DSF314.DNA | 651 | GCGGCGCAAG | CCGCGCGTGC | GCATCGAGGC | GCAGATGCAC | GGCGGCGGCC | 700 |
| DSF536F1.DNA | 651 | ----- | ----- | ----- | ----- | ----- | 700 |
| DSF536R1.DNA | 651 | --GCGCAAG | CCGCGCGTGN | GNATCGAGGC | GCAGATGCAC | GGCGGCGGCC | 700 |
| DSF53611.DNA | 651 | GCGGCGCAAG | CCGCGCGTGC | GCATCGAGGC | GCAGATGCAC | GGCGGCGGCC | 700 |
| DSF53612.DNA | 651 | GCGGCGCAAG | CCGCGCGTGC | GCATCGAGGC | NTAGATGCAC | GGCGGCGGCC | 700 |
| | | 710 | 720 | 730 | 740 | 750 | |
| DSF314.DNA | 701 | ACGAACGGGG | CTTCCGGTCG | GGCACGCTGG | CCACGCACCA | GATCGTCGGC | 750 |
| DSF536F1.DNA | 701 | ----- | ----- | ----- | ----- | ----- | 750 |
| DSF536R1.DNA | 701 | ACGAACGGGG | CTTCCGGTCG | GGCACGNTGG | CCACGCACCA | GATCGTCGGC | 750 |
| DSF53611.DNA | 701 | ACGAACGGGG | CTTCCGGTCG | GGCACGCTGG | CCACGCACCA | GATCGTCGGC | 750 |
| DSF53612.DNA | 701 | ACGAACG--- | ----- | ----- | ----- | ----- | 750 |
| | | 760 | 770 | 780 | 790 | 800 | |
| DSF314.DNA | 751 | ATGGGCGAGG | CGTTCCGCCT | GGCGCGCGAG | GAAATGGGCA | CCGAGAACGA | 800 |
| DSF536F1.DNA | 751 | ----- | ----- | ----- | ----- | ----- | 800 |
| DSF536R1.DNA | 751 | ATGGGCGAGG | CGTTCCGCCT | GGCGCGCGAG | GAAATGGGCA | CCGAGAACGA | 800 |
| DSF53611.DNA | 751 | ATGGGCGAGG | CGTTCCGCCT | GGCGCGCGAG | GAAATGGGCA | CCGAGAACGA | 800 |
| DSF53612.DNA | 751 | ----- | ----- | ----- | ----- | ----- | 800 |
| | | 810 | 820 | 830 | 840 | 850 | |
| DSF314.DNA | 801 | GCGCGTGCGC | ATGCTGCGCG | ACCGCCTGCT | GGCCGGCCTG | ACGCAGATCG | 850 |
| DSF536F1.DNA | 801 | ----- | ----- | ----- | ----- | ----- | 850 |
| DSF536R1.DNA | 801 | GCGCGTGCGC | ATGCTGCGCG | ACCGCCTGCT | GGCCGGCCTG | ACGCAGATCG | 850 |
| DSF53611.DNA | 801 | GCGCGTGCGC | ATGCTGCGCG | ACCGCCTGCT | GGCCGGCCTG | ACGCAGATCG | 850 |
| DSF53612.DNA | 801 | ----- | ----- | ----- | ----- | ----- | 850 |

Figure 7B

| | | | | | | | |
|--------------|------|------------|------------|-------------|------------|------------|------|
| | | 860 | 870 | 880 | 890 | 900 | |
| DSF314.DNA | 851 | AGGAAGTGTA | TGTGAACGGC | AGCATGGAGC | ACCGCGTGCC | GCACAACCTG | 900 |
| DSF536F1.DNA | 851 | ----- | ----- | ----- | ----- | ----- | 900 |
| DSF536R1.DNA | 851 | AGGAAGTGTA | TGTGAACGGC | AGCATGGAGC | ACCGCGTGCC | GCACAACCTG | 900 |
| DSF53611.DNA | 851 | AGGAAGTGTA | TGTGAACGGC | AGCATGGAGC | ACCGCGTGCC | GCACAACCTG | 900 |
| DSF53612.DNA | 851 | ----- | ----- | ----- | ----- | ----- | 900 |
| | | 910 | 920 | 930 | 940 | 950 | |
| DSF314.DNA | 901 | AACATCAGCT | TCAACTATGT | CGAGGGCGAG | TCTCTGATCA | TGGCGATCAA | 950 |
| DSF536F1.DNA | 901 | ----- | ----- | ----- | ----- | ----- | 950 |
| DSF536R1.DNA | 901 | AACATCAGCT | TCAACTATGT | CGAGGGCGAG | TCTCTGATCA | TGGCGATCAA | 950 |
| DSF53611.DNA | 901 | AACATCAGCT | TCAACTATGT | CGAGGGCGAG | TCTCTGATCA | TGGCGATCAA | 950 |
| DSF53612.DNA | 901 | ----- | ----- | ----- | ----- | ----- | 950 |
| | | 960 | 970 | 980 | 990 | 1000 | |
| DSF314.DNA | 951 | GGAGCTGGCC | GTTTCCAGCG | GTTCCGGCCTG | CACGTGGGCC | AGCCTGGAGC | 1000 |
| DSF536F1.DNA | 951 | ----- | ----- | ----- | ----- | ----- | 1000 |
| DSF536R1.DNA | 951 | GGAGCTGGCC | GTTTCCAGCG | GTTCCGGCCTG | CACGTGGGCC | AGCCTGGAGC | 1000 |
| DSF53611.DNA | 951 | GGAGCTGGCC | GTTTCCAGCG | GTTCCGGCCTG | CACGTGGGC- | ----- | 1000 |
| DSF53612.DNA | 951 | ----- | ----- | ----- | ----- | ----- | 1000 |
| | | 1010 | 1020 | 1030 | 1040 | 1050 | |
| DSF314.DNA | 1001 | CGTCCTATGT | GCTGCGCGCG | CTGGGCCGCA | ACGACGAGCT | GGCGCACAGC | 1050 |
| DSF536F1.DNA | 1001 | ----- | ----- | ----- | ----- | ----- | 1050 |
| DSF536R1.DNA | 1001 | CGTCCTATGT | GCTGCGCGCG | CTGGGCCGCA | ACGACGAGCT | GGCGCACAGC | 1050 |
| DSF53611.DNA | 1001 | ----- | ----- | ----- | ----- | ----- | 1050 |
| DSF53612.DNA | 1001 | ----- | ----- | ----- | ----- | ----- | 1050 |
| | | 1060 | 1070 | 1080 | 1090 | 1100 | |
| DSF314.DNA | 1051 | TCCATCCGCT | TTACCCTGGG | CCGCTTCACG | ACCGAACAGG | AAATCGACTT | 1100 |
| DSF536F1.DNA | 1051 | ----- | ----- | ----- | ----- | ----- | 1100 |
| DSF536R1.DNA | 1051 | TCCATCCGCT | TTACCCTGGG | CCGCTTCACG | ACCGAACAGG | AAATCGACTT | 1100 |
| DSF53611.DNA | 1051 | ----- | ----- | ----- | ----- | ----- | 1100 |
| DSF53612.DNA | 1051 | ----- | ----- | ----- | ----- | ----- | 1100 |
| | | 1110 | 1120 | 1130 | 1140 | 1150 | |
| DSF314.DNA | 1101 | CACGATCGAA | CTGATCAAGA | GTCGTGTCGG | CAAGCTGCGC | GATATGTCGC | 1150 |
| DSF536F1.DNA | 1101 | ----- | ----- | ----- | ----- | ----- | 1150 |
| DSF536R1.DNA | 1101 | CACGATCGAA | CTGATCAAGA | GTCGTGTCGG | CAAGCTGCGC | GATATGTCGC | 1150 |
| DSF53611.DNA | 1101 | ----- | ----- | ----- | ----- | ----- | 1150 |
| DSF53612.DNA | 1101 | ----- | ----- | ----- | ----- | ----- | 1150 |
| | | 1160 | 1170 | 1180 | 1190 | 1200 | |
| DSF314.DNA | 1151 | CGTTGTGGGA | AATGGCCCAG | GAAGGCATTG | ATCTGAATTC | CGTGCAGTGG | 1200 |
| DSF536F1.DNA | 1151 | ----- | ----- | ----- | ----- | ----- | 1200 |
| DSF536R1.DNA | 1151 | CGTTGTGGGA | AATGGCCCAG | GAAGGCATTG | ATCTGAATTC | CGTGCAGTGG | 1200 |
| DSF53611.DNA | 1151 | ----- | ----- | ----- | ----- | ----- | 1200 |
| DSF53612.DNA | 1151 | ----- | ----- | ----- | ----- | ----- | 1200 |
| | | 1210 | 1220 | 1230 | 1240 | 1250 | |
| DSF314.DNA | 1201 | GCCGCGCACT | GA..... | ..... | ..... | ..... | 1250 |
| DSF536F1.DNA | 1201 | ----- | ----- | ----- | ----- | ----- | 1250 |
| DSF536R1.DNA | 1201 | GCCGCGCACT | GA..... | ..... | ..... | ..... | 1250 |
| DSF53611.DNA | 1201 | ----- | ----- | ----- | ----- | ----- | 1250 |
| DSF53612.DNA | 1201 | ----- | ----- | ----- | ----- | ----- | 1250 |

Figure 7C

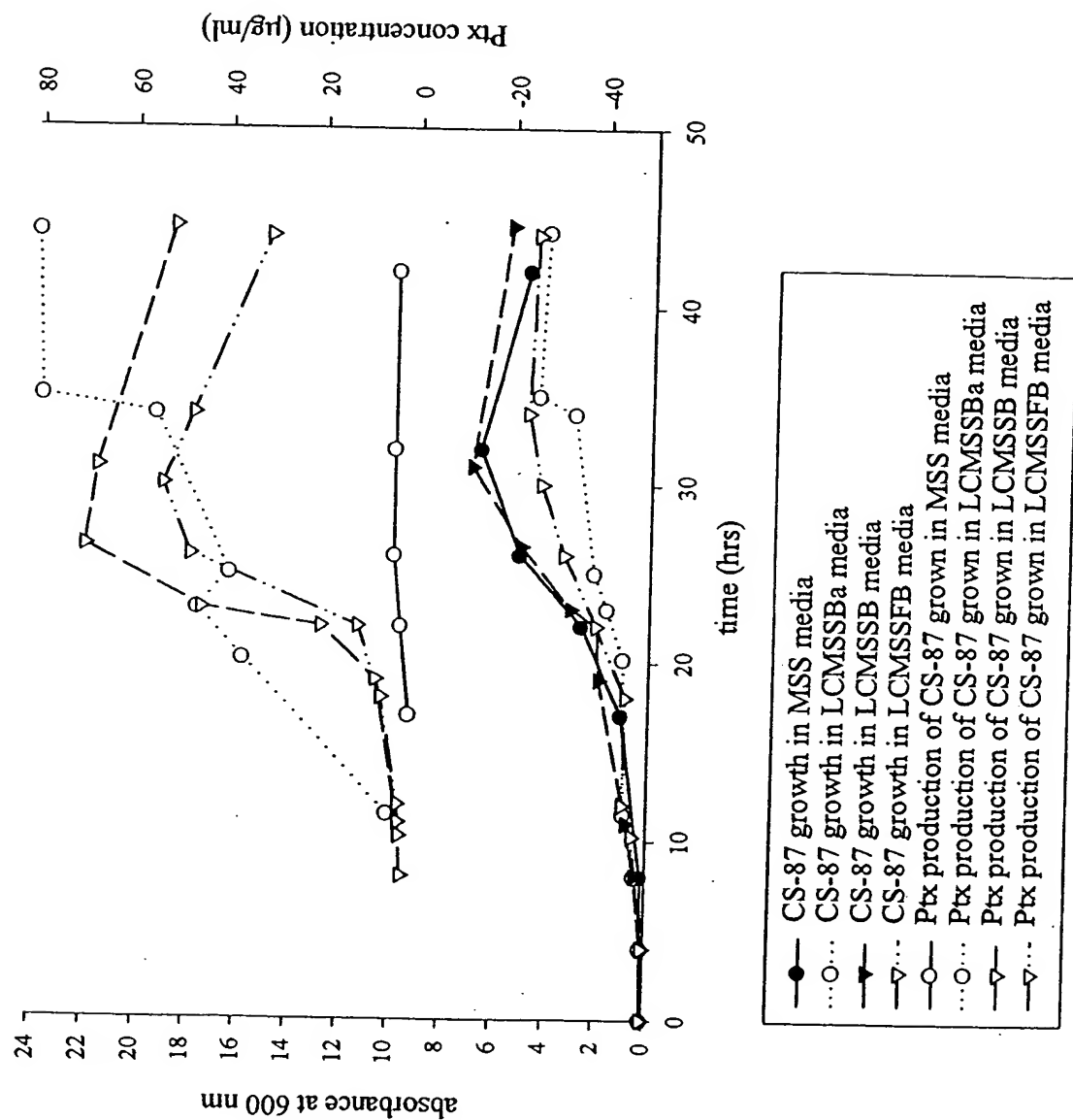


Figure 8A

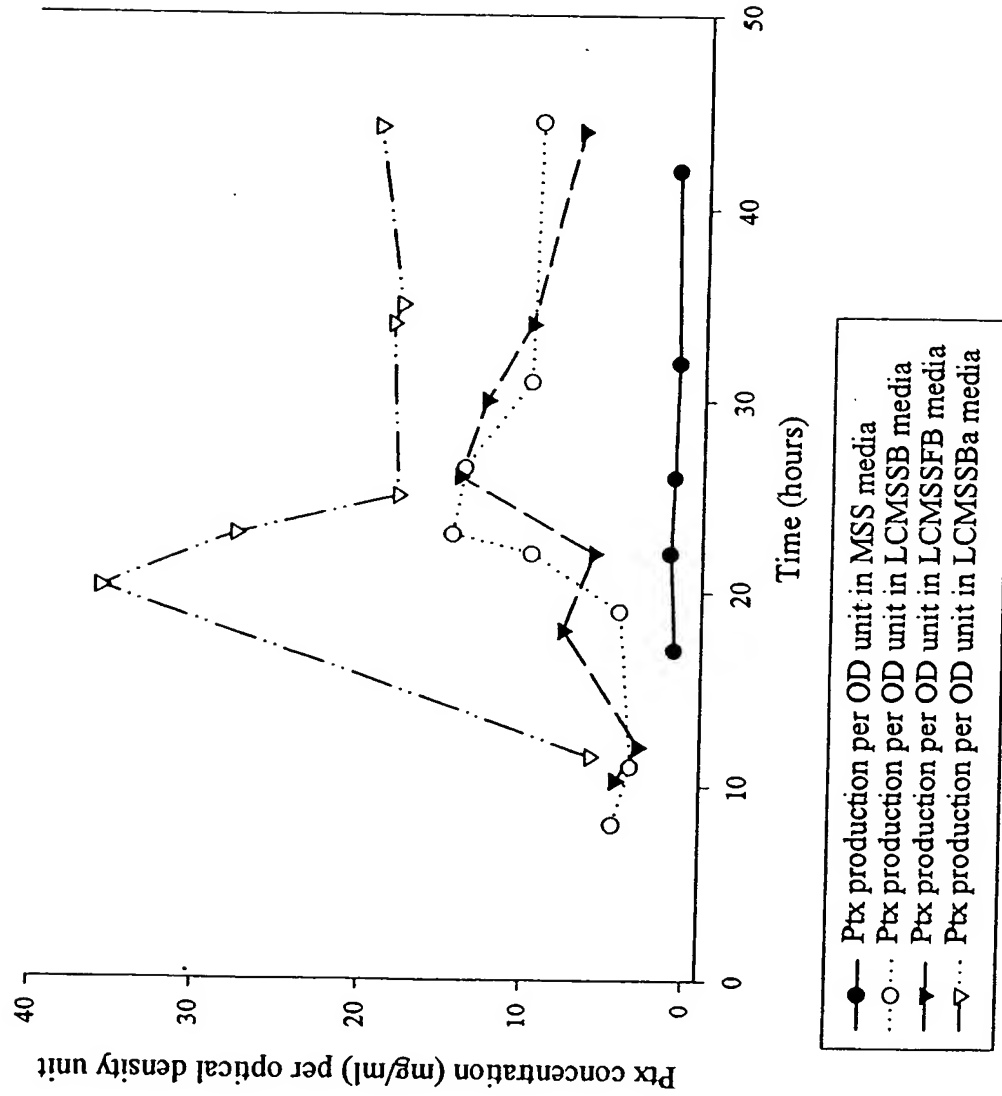


Figure 8B

Figure 9

